

Psychosocial Contributions to Climate Sciences Communications Research and Practice

An overview

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There is increased interest across governmental, private and public sectors regarding the psychological dimensions of climate change, particularly relating to effective communications and engagement with a variety of stakeholders and publics. The emerging role of climate scientists in public engagement creates new challenges for effective navigation of highly ideologically charged, complex, and cognitively and emotionally difficult issues. This paper argues that psychosocial thinking and research represents a significant 'skills gap' and offers an as-yet under-represented, and under-utilised contribution that can potentially inform our communications practice. In this paper, I explore the currently dominant 'orientations' to psychological dimensions of climate change engagement and communications via the "Quadrant Approach to Engagement" (Lertzman, 2014). In so doing, I argue for the need for truly integrative approaches that recognize the contributions across all four quadrants - behavioural, socio-cultural, systems and psychosocial - in effectively meeting the challenges presented by climate science communications. I offer potential solutions to achieve this, including improving the skills gap through training in core psychoanalytic and psychodynamic concepts most germane to this work: namely how people respond and handle anxieties, fears, and related psychodynamic processes such as defences and denial.

Introduction and Overview

It has become widely recognised that the practice of communicating about climate change science is a highly complicated endeavour. Such complications include translating and mediating technical, scientific discourse and data to a variety of audiences. A new

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complication has emerged: navigating highly charged emotional and ideological dimensions of this data. At the heart of these complexities is the urgent need for effective, constructive modes for communicating about climate change sciences. Effective and constructive in this context refers to the capacity to be clear, understood, and foster societal engagement and action commensurate with the current and anticipated implications and consequences of climatic change.

Many climate scientists currently find themselves amidst an unprecedented storm of debate, social and political tensions, with significant impacts on such capacities. In addition to being put under tremendous pressure to occupy a new role in the public and political domain, climate scientists are called on increasingly to 'speak' on behalf of climate change issues and their implications, often with little to no training, support or background in communications or the psychological impacts of climate change. In short, communications concerning climate change sciences face numerous challenges, some of which are outlined in the accompanying report, *Time for Change? Climate Science Reconsidered*.

The science of climate change can evoke powerful and complex psychological, cultural and social responses, the magnitude of which we are only beginning to appreciate. Psychosocial research (also referred to as "psycho-social") is increasingly recognised for its capacity to address some of these key challenges.² This is evidenced by the 2012 workshop University College London's Energy Institute, "Psychosocial Dimensions of Climate Change" attended by participants from governmental, private, public and research sectors; the well-received publication of *Engaging with Climate Change: Psychoanalytic and Interdisciplinary Perspectives* based on an event convened in 2010 at the Institute of Psychoanalysis; and the corresponding international media coverage (BBC, 2013; Knapf, 2013; Revkin, 2013; Revkin, 2010). In addition a new UK-based network, Climate Psychology Alliance (CPA) brings together researchers and clinical practitioners, producing a series of events and

² Some psychosocial researchers would argue, as Wendy Hollway does, that the hyphen is important: "We are *psycho*-social because we are products of a unique biography of anxiety- and desire-provoking life events and the manner in which their meanings have been unconsciously transformed in internal reality. We are *psycho-social* because such defensive activities affect and are affected by discourses and also because the unconscious defences that we describe are intersubjective processes... we are *psycho-social* because the real events in the external, social world are desirously and defensively, as well as discursively, appropriated (Hollway, 2004).

forums, and Oxford University's UK Energy Research Centre (UKERC) recently convened two events for participants across public, private and educational sectors, addressing psychosocial contributions to energy research and climate change science communications.

To appreciate and explore the implications psychosocial research can offer it is helpful first and foremost to establish the context. The paper thus begins with this task, using the *Quadrant Approach to Climate Engagement* (Lertzman, 2013). The first part of the paper provides a review of these four central orientations, via behavioural, social-cultural, psychosocial and systems and social practices. I then discuss how psychosocial research can complement, support and integrate with concurrent frameworks and methodologies. The paper concludes with reflections on next steps and the implications of integrating psychosocial approaches into our climate change science studies and practices.

Going Beneath the Surface: Overview of psychosocial contributions

Psychosocial research, in its recognition of both nonconscious processes (inspired by psychoanalytically informed social science research) and the inseparable interplay between social forces and subject engagement, slots into emerging research of climate change psychology and communications practices through designing investigations into experiential, and 'affective' dimensions. It can thus inform existing cognitive, social psychological and neuroscientific research concerning climate change issues.

At the heart of a psychosocial focus, as discussed below, is a conceptualisation of the human subject as dynamic, conflicted, multiple and capable of profound ambivalence. The attention is less on what is reported or appears as unified or consistent -- such as specific values, beliefs or attitudes -- and more on the dilemmas and conflicts that may inform practices and behaviors. Such dilemmas and conflicts are often inseparable from our sense of identities, and the perceived threat or risk to our identities as such. This focus on where people may experience conflict, rather than identifying core values, beliefs or opinions, is because it is taken as a given that we experience conflicts as we have different 'selves' and desires that may be actively competing; and we negotiate these conflicts through a variety of strategies and resources, including cultural frameworks, social norms and nonconscious defence mechanisms (i.e. rejection of scientific findings, disavowal or discounting). That is to say, what people report in an interview, survey or poll should not always be taken at face value;

and through a variety of methodologies we can explore the ways in which people may feel pushed and pulled, or experience a 'tangle' of dilemmas occasioned by climate change sciences (Lertzman, 2013; Randall, 2009). This focus can helpfully be understood in relation to existing approaches to cognitive, social and behavioural psychologies, which may share some concerns but are usually informed by different epistemic frameworks.

Psychosocial research, particularly as developed and practiced in the UK, is often informed by clinical psychoanalytic and psychotherapeutic practices. The term 'psychoanalytic social science' may be also used (Dodds, 2011). It is not uncommon for psychosocial researchers to be both recipients of research awards and to teach and run a private clinical practice. Due to this unique confluence of research and clinical orientations, key concerns reflected in a psychosocial approach (discussed in Part II), are informed by psychoanalytic practice, studies and theoretical developments; these are all actively being engaged currently in relation to climate change communications and can be leveraged to far greater extents. The key concerns highlighted by numerous researchers presenting the most relevance for the topic of climate change science communications include:

- Anxiety in relation to actual or perceived threats (Weintrobe, 2013);
- Loss, grief and mourning in relation to potential loss of identity (via social practices), anticipatory loss, or actual loss of species, practices, ways of life (Randall, 2009; Lertzman, 2013);
- Ambivalence, conflict and dilemmas, in relation to our responses to climate change threats, particularly with regards to energy consumption and consumption in general (Hoggett, 2013; Hoggett, 2011; Lertzman, 2012);
- Denial, apathy and disavowal in relation to acknowledgement of the issues, the scale of the issues, and our capacities for effective engagement (Norgaard, 2012; Moser, 2012; Lertzman, 2013).
- Social defence theory, in relation to how anxieties are managed and expressed in organisational contexts and dynamics (Randall, 2009; Mguni, 2011; Hinshelwood and Skogstad, 2002).
- The potentially manic drive towards 'doing good', targeting industry and energy sectors as 'bad' or 'evil' and adopting a morally superior stance (Zizek, 2011).

Psychosocial research contributions may include the following investigations:

- Recognition of anxiety and its role in informing how people process information and charged materials;
- Social mediation of climate change anxiety, such as the production of 'climate denial';
- Developing of specific tactics and skills to help people "process" climate change materials more constructively and effectively;
- Exploring and recognising meaning-contexts of energy and climate-related topics (not to be confused with values or opinions), and how this mediates how the sciences are engaged and processed;
- Addressing how identifications and attachments inform how climate change sciences are engaged;
- Acknowledging how loss, mourning and grief can be part of a coherent climate change engagement theory and practice; and
- Formulating and producing a theory of subjectivity and climate change, that address the so-called "gaps" and "barriers" between what people say and do, and what is considered to be "barriers", by positing a more dynamic conceptualisation of subjectivity that allows for contradiction, ambivalence, paradox, and unconscious defence mechanisms, such as denial or projection.

The field of psychosocial studies tends to be interested in the ways in which psychological and social processes demand to be understood as always implicated in each other, as mutually constitutive, co-produced, or abstracted levels of a single dialectical process. As such it can be understood as an interdisciplinary field and research approach; psychosocial studies often incorporates sociology, anthropology, psychology, geography and cultural studies (less so environmental studies, but this may be changing). Psychosocial research is also distinguished by its emphasis on affect, the irrational and unconscious processes, and often, but not necessarily, understood psychoanalytically.

Psychosocial research exists in a context of emerging approaches to climate change engagement. Thus this paper begins with a snapshot of current dominant schools of thought and modes of engagement to situate our discussion. These include behavioral and cognitive

psychology; social psychology; social practice theory and systems thinking, and psychosocial and psychoanalytic thought. As this paper argues, each of these orientations or 'quadrants' is *essential* for an integrated and comprehensive approach to the task of understanding and implementing more effective climate sciences communications.

While psychosocial research does encompass a range of methodologies and theoretical frameworks, Professor Paul Hoggett, former Director of the Center for Psycho-Social Studies at University of West England proposed four emphases:³

- Feelings and defences against feelings
- Framings/ narratives/discourses
- Internal conflicts, inconsistencies, dilemmas and dissonances
- Powerful group identities which often assume the form of 'we groups' (people like us) and 'they groups'

Each of these presents direct implications for climate change science communications, and specifically our capacities for designing innovative platforms, methods, and initiatives that can truly 'break the deadlock' and support more coherent, collaborative efforts for addressing the transition to a clean energy future. As long as we overlook these emphases, we risk overlooking the underlying mechanisms that give rise to what psychologists call "resistance" -- the profound ambivalence between continuing our ways of life, or facing the facts and working to shift our practices in support of mitigating the risks posed by global climate change.

Part I: Situating Psychosocial Studies: Mapping Current Approaches

As discussed in the report "Time for Change? Climate Change Reconsidered", psychological dimensions (i.e. 'mind sciences') are increasingly recognised as a critical element to meeting the challenges of climate change communications and public engagement. While psychological and behavioural aspects of climate change communications are often framed as a singular field, there are in fact multiple frameworks operating in research and practice communities. In addition, multiple sectors beyond academic research are also delving into

³ Presented at *Breaking the Deadlock in Climate Change Communication*, UK Energy Research Centre, Oxford University. 12 March 2014.

the science and practice of climate change communications: government, design sectors, marketing sciences, branding, communications agencies, sustainability education, behaviour change programmes and communications research are increasingly focused on generating insights on the psychological dimensions of climate change.

Engagement and Climate Sciences Communications: A Missing Link

A critical context for investigating best practices for climate change sciences communications - including this paper - is the task of engaging people in effective responsiveness in meeting the acute and urgent challenges presented by these unprecedented issues. For this reason, it is important to clarify what is meant by "engagement" and how this informs how we engage various behavioral and "mind sciences." Researchers Lorenzoni, Nicholson-Cole, Nicholson-Cole and Whitmarsh (1997) suggest "the term 'engagement'... is taken to mean a personal state of connection with the issue of climate change, in contrast to engagement solely as a process of public participation in policy making. A state of engagement is understood here as concurrently comprising cognitive, affective and behavioural aspects." At present, when we talk about engaging people (publics, stakeholders, scientists, etc.), we tend to combine, often unintentionally, divergent concepts concerning perceptions, opinions, attitudes, values, affect, framing, beliefs, views, emotions, and cognitive frameworks with climate change. This report aims to bring some clarification and distinctions across what will be discussed as the "Quadrant Approach to Engagement" and the ramifications for future research goals and objectives moving forward.

"Four Quadrants of Engagement"

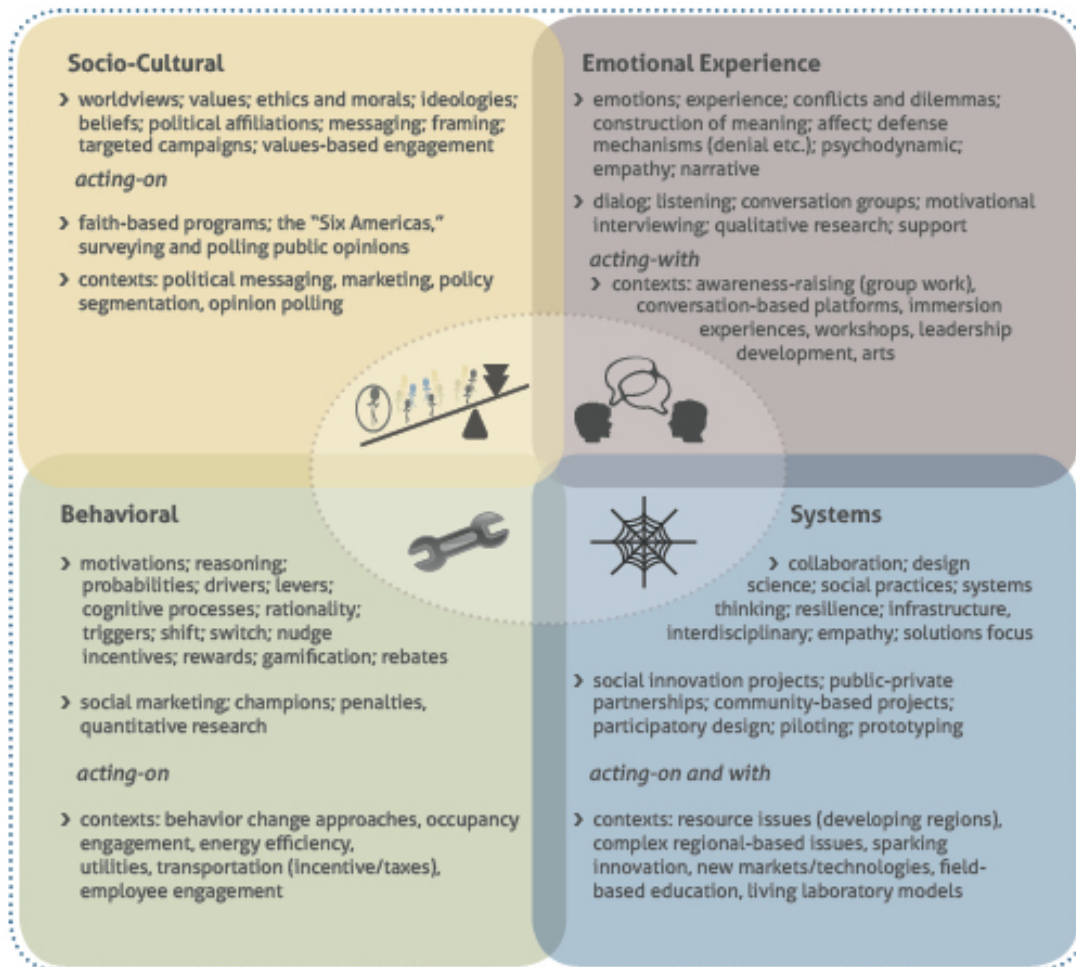
To help map the overlapping dominant 'schools of thought' active in today's climate change engagement/psychology arena, and thus enable our capacities in determining priorities and research programme goals, I have identified four central modes of orienting to the study and practice of the psychology of climate change sciences communications. As such, the Quadrants can be read as a 'genealogy' of ideas informing our present thinking. This is at best, a snapshot of current trends in research and communities of practice when it comes to psychological dimensions of climate change. These four Quadrants are porous and inform one another; it is important to stress these schools of thought or orientations share *many* concerns, goals, objectives and commitments. What is of most interest here is the

coexistence of varied, and potentially competing, *epistemological* underpinnings, or views of the world.

Such underpinnings inform problem definition, and therefore the details of methodological design and research (or if in the field, practical outcomes), constructing the forms of knowledge, data or 'insight' is generated. Perhaps most important, our epistemic orientations define what counts as "data" and measurable research outputs. Across these four areas, we find quite different areas of emphasis and measurements. Our research questions determine and inform what we currently know about human experience and cognitive processes: how we frame or define problems shapes our enquiries at every level. (For example, "What values are most salient for climate change mitigation practices?" reflects the assumption that values are entities to be measured, and that values matter.) We can discern through a review how legacies in social psychology, behavioural economics, risk communication, cognitive psychology, behavioural sciences - and more recently psychosocial and social practices - inform our current research mandates. The objective here is to identify distinctions to help us more critically engage and leverage respective contributions and schools of thought across the Quadrants, ultimately with the goal of increasing levels of *integration*.

Approaching the Quadrants from the lower left, we begin with the *behavioural* focus -- arguably, the most dominant orientation currently in this field. Moving up to the upper left, is a *social-cultural* focus, where the attention to values and attitudes is most dominant. In the lower right quadrant is the *systemic* focus, where behaviours are framed in the context of social practice theory, as well as a design-science approach to "solving the problems" through social innovation and technological system change. The upper right quadrant, is the *psychosocial* focus, which shares with social practices a systems thinking approach to the human in *relationship* with our environment and climate change threats, with a focus on meaning and how people unconsciously manage acute anxieties, conflicts and dilemmas raised by these topics. This is where the paper focuses its attention more centrally below, as an arguable 'missing piece' to the climate change psychology challenge.

The Quadrant Approach to Engagement



Renee Lertzman, PhD (2014), Quadrant Approach to Engagement™

Quadrant 1: Behavioural Focus

While we may think of research into people's psychological responses to climate change sciences as recent, one of the first papers addressing this intersection was *Hot Air: The Psychology of CO₂-Induced Climatic Change* by American decision analyst Baruch Fischhoff (1981). Fischhoff and his colleagues became involved with the US Department of Energy to help provide psychological input (1979)⁴. Fischhoff's colleagues included Paul Slovic, Daniel Kahneman, Amos Tversky, and Sarah Lichtenstein, some of whom have contributed more recently to climate change related studies. These researchers work within the general area of decision-research and decision analysis, and increasingly behavioral economics as it relates to climate change decisions.

Epistemic Underpinnings

How people psychologically respond to the climate change sciences in the 1980's was framed as primarily a problem of decision-making and information processing. The emphasis on cognitive processing of the data and facts continues to influence contemporary social sciences research today. The challenge of climate change science communication, through this lens, focuses on *information processing* (short/long term risks; unclear causality; systemic/abstract attributes of the topic; perceptions of science). The focus on *cognitive (individual) capacities* to process different forms of information, and how these processes inform human response lead to a focus on public awareness and informational campaigns, remains also an active emphasis in research programmes.

Summary

More recently, the dominant discourse concerning behavioural dimensions of climate change communications and engagement use the language of *levers; drivers* or driving factors; *choice; motivation/motivators; incentives; rewards*; optimizing; gamification; champions; eco-teams; taxes; feedback; dashboards (energy displays).

⁴ Fischhoff (1981), citing Sylvan Witwer at the Department of Energy-AAS Conference on CO₂-Induced Climatic Change, Annapolis, Maryland, April 6, 1979.

Behaviour change approaches build on cognitive behavioural research, identifying specific motivators and contexts. It is a *causal* approach as articulated in the TPB (Theory of Planned Behavior) model: social change depends on changing values and attitudes, which drive individuals' behaviors. The policy version of behavior change is a variant of what American psychologist Paul Stern proposed: "Behavior (B) is an interactive product of personal-sphere attitudinal variables (A) and contextual factors (C)" (Stern, 2000).

Motivation (or 'driver') is the significant focus in the behavior change paradigm. Here, motivation is similar to values; the *reason* for action or the *goal* of the action. Research clarifies that we cannot infer values by motives; they are distinct. For example Whitmarsh et al (2009) focused on different motivators for behavioral change and climate; behavior-change research hones in on describing motivations in terms of typologies, such as 'intrinsic/extrinsic' (Crompton, 2010).

One of the better-known behavioral economists invoked in relation to climate change communications is Kahneman (as discussed in the accompanying report). His work has clear relevance for work in climate change; specifically he calls out two systems of thinking (System 1 and System 2) to suggest different modes of processing information ("fast" or gut-level hunches, and "slow" or more considered, rational and deliberate processes). His work (2011) has become identified as a resource for understanding the slowness and arguably inept human capacity for responding to urgent and actual threats (presented by climate change). Kahneman's presentation of the relationships between the rational and intuitive systems is reflected in other popular books. The Heath's *Switch: How to Change Things When Change is Hard* (2010) and Haidt (2012) refer to the systems as the 'Elephant and the Rider' to illustrate these two processes.

Building on earlier work in risk psychology, a 'new generation' behavioural economics is incorporating the importance of *feelings* and *emotions* in understanding what drives human behavior. More specifically is the identification of meaning and purpose as strong motivators; in this respect there is a striking overlap with psychosocial and psychoanalytically informed research. As Pink discusses in *Drive* (2011), the efficacy of incentives and rewards is proven to be limited and short-term; further, we want to use

external rewards sparingly and with a great deal of thought, as they can backfire and reinforce a practice as unappealing. (Psychosocial researchers would likely point out that any form of external regulation has the potential to trigger reactivity and defences against being coerced, which can also backfire.) Engaging emotions and feelings in the more behavioural context tends to be framed as *motivating levers*.

- This earlier work emerges from cognitive behavioral sciences, which has informed – and in some cases become synonymous with – behavioral economics.
- The emphasis is on the human *cognitive* ability to weigh probabilities, and the interplay of rational and irrational processes, which Kahneman later referred to as “system 1 and system 2”.
- The unit of study tends to be the individual and the focus is the cognitive (rational) functions (or what psychosocial researchers refer to as the 'rational unitary subject').
- The concern is with understanding what ultimately drives behaviour and designing tools, methods, strategies to stimulate behavioural shifts.
- The central concerns are with cognitive information processing, reasoning, problem solving and to some degree, motivation.
- The context from which this work emerged is closely related to the nuclear energy industry, and the study of techno-industrial threats.

Quadrant 2: Social-Cultural Focus

This broad field of research is trans-disciplinary, drawing primarily on sociology, behavioral economics, communication studies and social psychology. A significant amount of research in this area is devoted to gauging public *understandings* of climate change issues, as well as a focus on values-based messaging and framing. This focus often concerns issues of science literacy, an issue’s legitimacy, the level of concern, and how highly rated the issues are in relation to other pressing social (and personal) problems. The additional central focus is on values, political ideological positions, beliefs, and framing climate change as ethical and moral issues.

Epistemic Underpinnings

Understanding is often defined in terms of *cognitive* grasp of the issues, how well we can translate complex, scientific information, while negotiating the affect-laden territory of uncertainty and potential threat to person and society. The focus on perception and understanding (versus, say, emotional associations or what the information *means* for us) is a legacy of risk psychology; Fischhoff laid out problematics in 1981 that remain active today. Focusing on how people comprehend scientific data is also closely related to sociologies of science (Wynne) and public engagement with science. The more recent focus on values, beliefs, attitudes and worldviews elaborates on basic concepts in risk psychology: that how people make sense of, how they understand the issues is paramount, and media/communications is the way to intervene (as opposed to other forms of engagement, such as collaborative projects, or conversation-based platforms, discussed below).

More recently, we can see how earlier studies on *understanding* are evolving into an attention to awareness, literacy and information campaigns. There is an implied causal relationship between awareness, knowledge and action (a relationship more contested in psychosocial and psychoanalytic orientations; see below). Significant studies and initiatives associated with this focus are the Yale Center for Climate Communication's (YCCC) "Six Americas" series of studies (led by Anthony Leiserowitz), and the collaborative research projects with George Mason University's Center for Climate Change Communication (4C) headed by Ed Maibach. The studies carried out by the YCCC are focused on capturing public perceptions and positions towards climate change threats. The "Six Americas" is a widely popular segmentation heuristic used across sectors to explain the multiplicity of views around these issues. The organizing principal of this and related studies is to organize the American population into segments and 'profiles,' which can then be targeted and leveraged for communications strategies and messaging. This reflects the objective to uncover values, perceptions, beliefs, political positions and ideological investments to better gauge, predict and inform messaging strategies.

Summary

Research into value-based messaging and framing has grown over recent years, sparked by the influential WWF-UK report, *Our Common Cause* (Crompton). This report focuses on research conducted primarily by American social psychologist Tim Kasser, and the concept of intrinsic/extrinsic values (values that are relating to extrinsic or external, materialistic

entities such as objects, or intrinsic values such as relationships, quality of life, and so on). It's a conceptual framework developed initially in moral philosophy and also engaged in behavioral economics and is increasingly articulated in the emerging studies on wellness and well-being.⁵

Similarly, research investigating the ethical and moral dimensions of climate change is a subset and elaboration of the broader social-science-and-framing school of thought. The interest in ethical and moral dimensions often focuses on the design and implementation of effective values-based, ideologically sensitive messaging and framing (cf. Haidt, Markowitz).

- Engagement is usually conceptualised as finding the most effective means of communicating, framing and messaging the issues; the presumption we must find more effective ways to adequately communicate and message the threats and implications of climate change.
- Research on levels of awareness and literacy about climate sciences have continued to demonstrate a weak link between knowledge and practices; also referred to as the "information deficit model."
- More recent research in tribal psychology, social norms and the social production of denial contribute to recognition of the role of social contexts and forces in how people engage with, and process climate sciences communications and education.

Quadrant 3: Social Practices and Design Science Focus

An approach informed by systems theory, social practices and design (solutions) focuses on engagement with climate change threats at the macro, systemic level. This includes social practices studies; 'social innovation' strongly informed by design sciences and agencies and participatory action research. These are 'systemic' in that they address interventions at the systems level, such as availability of resources, policies, culture, ideology, beliefs and customs. In contrast to behaviour change initiatives, which target specific or discrete actions or practices, or psychosocial (discussed below), systems-informed work tends to incorporate community-scale work and importantly emphasises *participation* and

⁵ Kasser has also developed what he calls the "Aspirational Index" to illustrate how appealing to extrinsic values causes the investment in intrinsic values to go down. (See <http://faculty.knox.edu/tkasser/aspirations.html>)

collaboration. The shift from a focus on behavioural change to social practices is illustrated by Elizabeth Shove, who writes, “The idea that desires and attitudes drive behavior produces a blind spot at a particularly crucial point, making it impossible to see how the contours and environmental costs of daily life evolve” (2010).

Epistemic Underpinnings

“Social innovation” discourses emerge from innovation, science and technology studies, evolutionary economics, design science and complexity studies. This is an interdisciplinary hybrid focused on real-world, applied problem-solving initiatives, and a solutions orientation. The epistemic underpinning is concerned with real-life, actualised solutions and impact. There is a strong influence from behavioural sciences, in the focus on motivation and “levers” to enable or produce (or engineer) desired social results. Examples of social innovation projects include Dean Karlan’s Innovations for Poverty Action (IPA), ideo.org (whose tagline is “Let’s design a better world with everyone”), and a growing number of social innovation programs based in design schools (Stanford’s D-School, an innovation hub and new *Social Innovation Review*; School of Visual Arts’ new “Design for Social Change” program and Futerra’s “Sell the Sizzle” campaign).

Another ascending orientation in this quadrant is *social practices*, emerging in interdisciplinary social sciences (primarily sociology), in part a critique and rebuttal to the “ABC” (attitude-behavior-choice, or behavior change). This work, advanced most visibly by Elizabeth Shove (2010) is being recognised as a viable competing discourse to the behavior change ideology dominating much climate change engagement thought and practice.

Summary

As Shove states in the landmark paper, *Beyond the ABC: climate change policy and theories of social change* (2010), “Framing the problem of climate change as a problem of human behavior marginalizes and in many ways excludes serious engagement with other possible analyses, including those grounded in social theories of practice and transition.” The “ABC” stands for attitude, behavior and choice, the popular framework currently in play particularly at the policy level. Shove’s central critique is that the “ABC” is not only a theoretical approach, but that its politics obscure the extent to which governments sustain unsustainable economic institutions and ways of life, and have a hand in structuring options

and possibilities. It is not only in governmental sectors this applies; the ABC is alive and well in many sectors, including the private sector where the ABC is the primary orientation for engagement.

The perspectives represented by studies of social practices are similarly systemic and concerned with the 'macro' level of change as social innovation. The interdisciplinary nature of social practices work recognizes the importance of what produces social practices – how social arrangements hang together and how they fall apart. Shove refers to the “transition management” concept in the Netherland’s environmental policy, adopted as part of the Dutch National Environmental Policy Plan (Shove, 2010). In contrast to ‘change management,’ ‘transition management’ is concerned with how deep, systemic change can happen at multiple levels (policy, economic, educational, behavioral, etc.).

An example of the attitude social practices may have towards behaviour change is expressed by David Uzzell: “Trying to persuade people to consume and waste less through behavior change programs will not address the larger and more significant problems concerning the ways under which people need or think they need to live and consume” (2008). A social practices focus also tends to view social transformations as requiring not only new technologies (i.e. technology to stimulate new behaviors, such as energy dashboards or hybrid cars), but also “new markets, user practices, regulations, infrastructure and cultural meanings” (Elzen et al, 2004).

Social practice theory arguably presents a systemic approach to behavioural change; behaviour lives “*within* rather than outside this system. Accordingly, it makes no sense to attribute behavioral change to a cast of externalized factors. Instead, the model is one in which institutions, infrastructures, and daily life interact” (Shove, 2010). In this context behaviour is above all, viewed as complex interactions that do not originate with the individual; therefore a focus solely on individual behaviours does not make sense. Second, historical contexts matter profoundly in understanding what people do, and why they do it. Third, design and infrastructures inscribe patterns of consumer demand far more significantly than individual consumer choices. Finally, there is the recognition that innovation is a critical driver of myriad behaviours; our focus on messaging and framing is only one element in a larger whole. In other words, the sort of changes required to truly

address the challenges of climate change are deep systemic changes, which require the status quo to be questioned – and regimes changed. It is important to note social practice theory is not necessarily focused on affective or psychic processes; the central intervention appears to be the destabilizing of a focus on individuals by recognising how behaviours are products of our social contexts; and the tendency for governmental agencies and programmes to focus on 'behaviour change' without having to address the broader contexts in which we live. This orientation presents tremendous potential for collaboration with psychosocial focus on affect, emotional investments in particular practices; and the role of identity, attachment theory and practices (how our practices inform and shape our identity investments, and hence present formidable challenges in attempting to shift them).

- The systems-orientation is most readily seen in developments of 'social innovation' illustrated by such entities as IDEO, the Buckminster Fuller Challenge, Positive Deviance; focus is on *designing* solutions.
- Theoretically we can see systems-orientations emerging in social practice theory, rapidly developing as a framework for supplanting a centrally behaviouralist and cognitive orientation (i.e. critiquing behavioural change as piecemeal and lacking context).
- Systems and social practice theory frameworks are centrally concerned with connecting people with solutions, opportunities to engage and in some cases, participatory, collaborative platforms. This combines an emphasis on listening, dialogue and conversation with "solutions" and solving problems.

Quadrant 4: Psychosocial Focus

As discussed in this paper, psychosocial research is a relatively new and growing contribution to the current approaches engaged in considering the psychology of climate change sciences communications and education. In contrast to a focus specifically on behaviours, values or ideological positions, or systemic innovation and social production of practices, psychosocial research tends to focus on the felt, lived experience of climate change implications, and the traumatic aspects of becoming aware of climate change sciences and threats. There is also a strong focus on the conflicts, dilemmas and struggles occasioned by socio-political issues, and how people negotiate and navigate them. Psychosocial foci tend to emphasise *conversation*, dialog and how we make meaning out of

information and data. Conversing or facilitating 'conversation-based platforms' are viewed as a mode of supporting behavioural shifts; as Rosemary Randall, psychoanalyst, founder of Cambridge Carbon Footprint, and creator of Carbon Conversations states, "If you want people to change, you've got to listen to them. You've got to understand what stops them from making changes or engagement with issues. And you find that happens through starting conversations."

Epistemic Underpinnings

The most significant epistemic underpinning of psychosocial research is the recognition that unconscious drivers underlie and inform individual and social practices. This approach therefore generally favors in-depth research methodologies to explore and observe how conflicts and contradictions are negotiated (i.e. the desire to protect the Arctic and the desire to have a holiday in New Zealand), and researching *affect*, the emotional or feeling "charge" associated with certain practices and topics (Walkerdine, 2012). Arguably at the core of a psychosocial investigation, strongly informed by psychoanalytic research and practice, is understanding *how people manage anxiety and undesirable information and awareness, in relation to how and why people respond (or engage) with climate change issues*. The affective, less conscious dimensions are critical in understanding and being guided to information not otherwise available through our own self-reports and conscious recollections.

For example, acute guilt, remorse or fear in response to climate change science literacy may not be necessarily cognitively conscious, but may still be a strong influence in how people may relate to the issues, and subsequent behaviours. Clinical psychologists are well aware in the context of therapeutic practice of how (usually unconscious or semi-conscious) guilt can lead to a 'shutting down' and defences to ward off such difficult, potentially intolerable painful experiences. Critically, there is a keen interest in how experiences such as guilt, anxiety, anticipatory loss, fear and anger may in fact shape and inform behaviours, from the policy level and stakeholder engagement, to decisions made in the supermarket aisle or travel plans. Related to a keen interest in affective dimensions, psychosocial research potentially addresses the significance of potential *loss* and *mourning* -- in the broadest sense possible, from our sense of identity to actual losses of species or ways of life -- in relation to climatic changes and disruptions. It is critical to highlight that loss, mourning, guilt and

related experiences may not be actually 'known' to the person, but may be operating at least conscious levels; it is typically only through conversation, dialogue, interaction that such dimensions can be more known. In this sense, psychosocial theory and methodologies have direct relation and descendance from clinical psychotherapeutic practice, in which the relational encounter is well established as the key mechanism for change and therapeutic benefit. In a psychosocial approach, there is the general recognition that people will avoid threat and risk, and protect their need to feel safe and secure. Psychosocial research also offers a nuanced way of understanding how guilt operates psychodynamically; it is well known that guilt often leads to a 'shutting down' and defensive mode, again often below the surface of our consciousness. This negotiation of such distressing experiences as guilt, loss, anxiety can lead to what can be described as "denial", projection, avoiding or diverting responsibility, apathy, and disavowal.

The terms "emotion" and "affect" are often used interchangeably in social sciences; however the distinction is critical in the psychodynamic and psychosocial context. Those influenced by advances in neuroscience and some of the 'nudge' theorists (Thaler and Sunstein, 2009) discuss affect in terms of 'the quick and dirty route' for information processing (via the amygdala). While this is not necessarily 'wrong' from a psychosocial perspective it limits our understanding of affect as "preconscious". In emphasizing the physiological foundation, it disconnects affect from its social, cultural, political and ideological contexts– a key interest for psychosocial researchers in relation to climate change (Hoggett, 2010; Clarke and Hoggett, 2009). *In other words, affective dimensions of climate change sciences are also influenced by the specific cultural and social contexts in which they may be experienced. Insofar as we are able to understand, and thus integrate these contexts into our research and analyses, we are arguably more effective at designing engagement, communications, outreach and programmes more sensitive and adapted to these specific contexts.*

For example, guilt, anxiety and loss may be considered as powerful unconscious affects strongly informing how and why people group and align to the particular 'cultural cognitions', values, worldviews, beliefs and practices. This is an important distinction from analyses that focus solely on how political ideological positions can determine and inform how climate sciences are engaged; the attention is on *what drives us towards particular affiliations and group identities, as strategies for managing particular uncertainties or*

*affective processes.*⁶ One way of understanding affect is as energetic, often unconscious feelings or mood that accompany certain issues, topics, objects, or places. Affect is often experienced as a felt sensation in groups (i.e. the feeling of anxiety, excitement, etc. in a room, gathering, project, etc.). Affect in relation to climate change sciences may involve dread, terror or rage. It matters for psychosocial researchers of climate change because climate change is recognized as an issue likely to arouse extremely charged affects (i.e. anxiety, fear, worry, loss, etc.). *How we work with this is arguably central for how we work with climate change sciences communications, and in our stakeholder engagement processes.* Rather than engaging with 'affect' as a sense of "goodness" or "badness" (Smith and Leiserowitz, 2012) a clinical understanding of affect is on the whole more comprehensive and nuanced, including the way affect is felt in the body and experienced viscerally, i.e. repulsion, desire, fear, anxiety, and so on.

Engaging with climate change psychosocially is therefore arguably about addressing and acknowledging how people are *experiencing* these threats at multiple levels – identity, attachments, fears, concerns, desires, hopes and aspirations for the future. In order to do this effectively the need to create a "safe space" is imperative, and includes attention to *listening, dialogue, conversation* and use of tools as motivational interviewing, 'smart questions', and conversation-based platforms.⁷ This style of engaging, informed by clinical psychotherapeutic practice, recognizes that *in the act of sharing and exchanging, people are far more likely to bring conflicts, dilemmas or contradictions to light in a safe and supportive environment, work through them and find ways to creative solutions.*

A significant contribution emerging from the psychosocial studies of climate change is this recognition that people need a 'safe space' to successfully address underlying concerns, and

⁶ This level of analysis is brilliantly demonstrated in Bryant Welch's *State of Confusion: Political manipulation and the assault on the American mind* (St. Martin's Press, New York, 2008), where Bryant brings together his background as a solicitor and clinical psychologist working in the Clinton Administration. Bryant addresses how affect -- in this case, acute uncertainties regarding economic stability and global events post September 11, are coopted by the rise of the American Tea Party.

⁷ Fischhoff (1981) acknowledged that social interaction and discussion as just as important for changing practices as raising awareness about issues; this point somehow was dropped from much of the subsequent research in risk psychology. Use of interaction for behavioral changes is well known; most visible is the work of AA and 12-step groups (CITES), whose primary efficacy is the social/group interactivity.

anxieties (Randall, 2013; Weintrobe, 2012). This emphasis on safety is directly related to the tendency for engaging in defence mechanisms -- i.e. denial, avoidance, projection, hostility, discounting -- when we feel threatened or at risk of being attacked for our views, feelings and experiences. It is the lynchpin of effective therapeutic practice, which is increasingly being acknowledged as having relevance for the practice and study of climate change communications and engagement. A 'safe space' generally involves people feeling safe enough to express or feel whatever emotions that may arise in relation to these potentially highly distressing, upsetting or frightening topics. It also usually requires skilled facilitation. In absence of this 'safe space,' the likelihood of guilt, despair and apathy can arise and cause withdrawal or outright avoidance/denial of the issues. At a recent workshop convened at University College London, several leading climate scientists and researchers were brought together in dialogue with a few established psychosocial researchers to explore the implications of this approach. One of the key insights to arise was the importance of this 'safe space' which can be achieved not only literally in spaces, but through how we communicate about the issues.⁸

While much funded research on public engagement with climate change is situated in cognitive behavioral or social psychological orientations, i.e. on attitudes, values, beliefs, or ideological positioning, there have been a few notable contributions to the role defense mechanisms have in how climate change issues are negotiated. Stoll-Kleeman et al (2001) at the Ernst Moritz Arendt University of Greifswald in Germany conducted in-depth interviews with focus groups; they found that people tend to rationalize their inaction, creating arguments that blame others, under-emphasize the importance of personal action, and over-emphasize the costs of shifting from a comfortable lifestyle. In a related study, American sociologist Kari Norgaard (2011) examined how denial of climate change in a Norwegian skiing community was 'socially produced' and a complex expression of the capacities to both know and "not know" (and not engage; or what Weintrobe (2013)

⁸ Rosemary Randall discussed Churchill's capacity to provide a sense of safety and containment in his 'We Shall Fight on the Beaches' speech. As Randall writes, his "truth-telling about the scale of the defeat, accompanied by a refusal to blame, that allowed him to argue with conviction that the British people remained able to face and overcome the crisis before them. Whatever one thinks of Churchill as a politician, his psychological sure-footedness is worth studying" (2013; see "The Id and the Eco," <http://www.aeonmagazine.com/being-human/rosemary-randall-climate-change-psychoanalysis/>).

identifies as "disavowal") with the acute issues facing their region, populations, and ecosystems as temperatures rise.

In terms of engagement strategies and applications, psychosocial work is in early stages of development. Perhaps the most well-known engagement project informed by this orientation is the Carbon Conversations project. Rosemary Randall, with Andy Brown as founders of Cambridge Carbon Footprint (CCF) developed an approach to taking people through the 'carbon footprint calculator' using motivational interviewing as a way to negotiate defense mechanisms that tend to arise (guilt, dismay, embarrassment, etc.). The centerpiece of CCF's engagement work was Carbon Conversations (what I refer to as a 'conversation-based platform'), run by volunteer facilitators to support people adapting to a lower carbon lifestyle. The basic format is a series of six group meetings, during which participants work through a workbook designed to focus on climate change science literacy and individual behaviour changes. The core methodology, inspired by psychodynamic practice and group work, is organised on the premise that in bringing people together informally to discuss the implications and impacts of such issues and changes, forms of social support emerge, as well as the capacity for people to 'work through' the often difficult and potentially distressing implications of such changes. It is a demonstration of conversation as a basic tool for supporting behavioural changes, in no small part due to simply providing people a "safe" and unthreatening space to talk through whatever issues, concerns, feelings, or questions that may arise (Randall discusses this in considerable detail in her paper *Loss and Climate Change: The Cost of Parallel Narratives* (2009)). While the impact has not been fully measured and evaluated, recent research has begun to explore its success (see Howell, 2013), and is widely acknowledged anecdotally as being highly effective. As discussed below, this platform is also an excellent (and rare) example of an *integrative approach*, where the psychodynamic focus is combined with behavior change (providing people with resources, tools for change, a context for meeting and discussing), and addresses people's underlying values and identities.

Part II: Key Contributions of Psychosocial Research

Targeting the Psychosocial Dimensions of Climate Change Sciences

As discussed, there are several key topics in psychoanalytic psychosocial thought and research that have direct relevance for climate change sciences communications. They concern the points of conflict, dilemma and anxiety that can be occasioned by energy and climate change science literacy, awareness or direct experience of the impacts and implications of climate change. They also concern the fact much of this is often unconscious and expressed through preferences, actions, beliefs and the so-called "gap" between knowing and doing. Such conflicts, dilemmas and anxieties are clearly myriad in type and context; however psychosocial research methods and theoretical frameworks can help us understand the ways in which people may feel overwhelmed, paralyzed or a variety of emotional responses that directly inform our behaviors and practices. For example, if the prospect of not engaging in air travel casually and frequently presents an acute conflict in terms of identity or investments, it is entirely possible a strategy may be to ignore, deny or disavow the threats in order to continue the behaviour. This is clearly not limited to individuals, but as Norgaard (2012) notes, denial is a social production -- we tend to need others to engage in it. From a psychosocial perspective, these strategies of avoidance or denial of the existence of climate change threats does not suggest, as many may assume, a lack of concern or care for our climate future, our environment, the species impacted by climatic changes. Rather, it suggests the often less conscious, complex ways in which people negotiate dilemmas that are not always constructive or in alignment with our values (the so-called "gap" between our attitudes and our actions). It is here psychosocial research and perspectives can offer insight to guide best practices and innovative platforms for engagement.

Anxiety: A Core Focus

What is at stake in our discussions of climate change science is no less than our survival, way of life, and the myriad ways we construct our lifestyles to support particular identities and attachments (Weintrobe, 2013; Randall, 2009). In addition, the implications of climate change science pose severe risks to nonhuman life, which can incur a profound sense of fear, loss and helplessness (see below). In presenting the facts of our predicaments, we are unwittingly stimulating profound anxieties which we may or may not be fully conscious of. While the tendency is to focus on communications to minimize anxieties and help promote greater "can-do" attitudes for both mitigation and adaptation, ignoring or overlooking anxiety tends to undermine our best efforts. Anxiety is particularly salient for a

psychosocial approach to climate change science and communications for the reason that anxieties tend to produce defence mechanisms, such as outright denial, projection, and disavowal. All of these maladaptive strategies are well documented and a popular theme in mainstream media; while there is much outcry regarding "climate denial" there is little investigations into what informs it; psychosocial research addresses how anxiety is a key factor.

While the role of anxiety and fear has been addressed to some extent in a few studies (Stoll-Kleemann et al, 2001), we need greater understandings of how anxiety promotes the very behavioural responses that are most undermining to any effective response to mitigation of climate change threats. Specifically, existential anxieties about survival, arguably invoked powerfully through the implications of global climate change, can lead to denial and disavowal (Weintrobe, 2013; Lertzman 2013). Through the use of methodologies designed for investigating less-conscious domains of subjectivity (i.e. narrative-based methodologies based on in-depth interviews and 'psychoanalytic research interviews' (Cartwright, 2004) we can understand how anxieties about our climate may contribute to withdrawal, paralysis, numbing, disavowal and despair. Such understandings can inform strategies, initiatives and processes for addressing anxiety, such as the formation of group discussions, facilitator trainings and communications trainings for climate scientists and related professions engaging with public and stakeholder engagement.

Developing strategies, techniques and tools to support climate scientists and climate communications to address anxiety is critical; the need for designing such training and support can be achieved through both funding research initiatives and partnerships with psychoanalytic and psychosocial practitioners and applied researchers. As noted, the importance of creating a "safe space" for engaging with such anxieties is central; this can be done both directly (small group/conversation-based platforms, i.e. Carbon Conversations) or through skillful messaging and campaign work (i.e. media, messaging and leadership that conveys recognition of our anxieties as part of a strategic communications approach).

Research Foci

As stated above, psychosocial research lends itself to the design of research enquiries targeting the experiential dimensions of climate change sciences: not only how it is

perceived, made sense of, but *felt, experienced and responded to emotionally and affectively*. This all informs the practices and behaviours most easily observable, from transportation patterns, to how people use energy to heat their homes, to the outright denial of the validity of climate change science. They may include aspects of the following:

- Recognition of anxiety and its role in informing how people process information and charged materials;
- Social mediation of climate change anxiety, such as the production of 'climate denial';
- Developing of specific tactics and skills to help people "process" climate change materials more constructively and effectively;
- Exploring and recognising meaning-contexts of energy and climate-related topics (not to be confused with values or opinions), and how this mediates how the sciences are engaged and processed;
- Addressing how identifications and attachments inform how climate change sciences are engaged;
- Acknowledging how loss, mourning and grief can be part of a coherent climate change engagement theory and practice; and
- Formulating and producing a theory of subjectivity and climate change, that address the so-called "gaps" and "barriers" between what people say and do, and what is considered to be "barriers", by positing a more dynamic conceptualisation of subjectivity that allows for contradiction, ambivalence, paradox, and unconscious defence mechanisms, such as denial or projection.

Innovating research methodologies

A psychosocial approach includes, (but is not limited to), the ability to conduct qualitative research that is attuned to issues of affect, experience, subjectivity, unconscious processes and the incorporation of the researcher's subjectivity in the research. It also suggests sensitivity to cultural, social and political contexts in which the research is taking place. Such an orientation is quite distinct and unique from conventional qualitative research methods, and accordingly, training is tantamount for the effective application of this emerging field in the social sciences. The skills involved for both research design and analysis of data tend to involve practices informed by both clinical psychology -- how to

create interview contexts conducive for free-association, narrative richness and rapport, all vital for exploring 'beneath the surface' of our reflexive opinions, defenses and attitudes -- and narrative qualitative research, a highly established orientation in social sciences focused on uncovering meanings conveyed by participants in the interview settings. This requires specific skills for engaging in discourse analysis, and significantly the ability to engage with the contradictions, confusions, mixed messages and incoherence so common in research interviews. The focus of this research is less about capturing what people's perceptions or opinions may be; rather what may be taking place on a less conscious level, i.e. how the material may evoke powerful fears and anxieties about the future, anticipatory threats to well-being or security, or more diffuse emotional responses of anger and betrayal towards those "in charge". Methodologies are thus designed with the goal of creating a safe and containing rapport and space, so participants can disclose and be as open as possible. This is a strong emphasis in most psychosocial research methodologies. This is a stark contrast to how surveys and interviews tend to be conducted, which may not attend to the emotional context as much as endeavouring to capture the most top-level, top-of-mind associations with climate change (which tends to focus on ideology, beliefs, perceptions, political affiliations, or debates regarding the credibility of the sciences).

At present, research methodology courses in social science programmes may not include training in psychosocial methodologies, leading students to seek training through short courses, workshops and enrolment in other programmes offering such training, i.e. Tavistock Institute, the Department for Psychosocial Studies at Birkbeck, or short programmes offered by independent researchers). The reason it is critical to address specific training for these methods is due to the fact that psychosocial research is informed by a specific theoretical framework, largely informed by psychoanalytic practices and epistemologies. As I have attempted to clarify above, theoretical assumptions influence every aspect of our research -- how we design interviews and data collection, the lens we use for analysis, how we define the problem, and what constitutes as data. Thus, the research questions, types of data generated, and how it is engaged in various contexts are inseparable from the particular theoretical frameworks we engage. This is why it is vital to remain cognizant of the varied epistemic and theoretical approaches outlined above; it enables us to clearly and critically interrogate what methods are best suited for these particular contexts, in which our social, political, ecological and psychological worlds are deeply imbricated, and we scarcely comprehend the psychological magnitude of how

climate science literacy is experienced and negotiated. In the case of psychoanalytic social science research, or psychosocial studies, the theoretical underpinnings tend to involve "a meaning-centered approach that strives to explore unconscious processes, self- and object representations, defenses, and so forth through the analysis of narratives as they are constructed around the subject of the interview (Cartwright, 2002)

The interest in psychosocial research methodologies, with attention to clinical psychoanalytic influences, is growing in the UK. This is arguably a result of the recognition that our current approaches have not yet enabled us to fully understand, (and thus design more innovative communications and engagement practices) the complexity of the human psychological response to climate change threats. With the increasing focus on climate denial and political polarization, the interest in going 'deeper' and actively engaging with psychological and psychoanalytic practitioners and researchers is rising. This interest is evidenced by the newly formed UK-wide Psychosocial Network, courses and workshops on offer that quickly become over-subscribed (e.g. University of West of England, Open University), and the creation of new centres for research (e.g. University of East London's Centre for Psychosocial Studies). Due to the innovative nature of this work, there is currently a skill shortage, with very few researchers actually trained in psychosocial methods and a noticeable gap in what offered in social sciences research methods training modules.

Approach and underpinning rationale

Fundamental to the practice of psychosocial research methods is the ability to have what has been called an "analytic attitude". This attitude centres around a concern, interest, and respect for the presence of unconscious processes in the research endeavour – both in the researcher, as well as in the material that is generated. As more researchers in the social sciences become aware of this work, there runs the risk of producing work that is either not particularly psychosocial, or misses out on vital elements of what is entailed.

Developing and supporting research capacities via trainings, programmes, workshops, is recommended to provide researchers with the opportunity to explore and investigate aspects of psychosocial research methods: strengths, limitations, and parameters. This is based on the premise that similar to clinical practice, in order to conduct psychosocial research skillfully requires a level of training and exposure to practices that can help social

scientists become “attuned” to the analytic attitude and the sensibilities involved in undertaking this approach. Such training requires similar skills used in clinical contexts, where practitioners can practice becoming attuned to the ways in which rapport and 'safety' can be fostered (i.e. use of empathy-driven practices such as motivational interviewing, appreciative inquiry or dialogic interview methodologies such as the Psychoanalytic Research Interview (Cartwright, 2002), Biographical Narrative Interpretive Method (Wengraf, X), Free-Associative Narrative Interviews (Hollway and Jefferson, 2001), or Dialogic Relational Interviewing (Lertzman, 2012)), the ethics of conducting psychosocial research, and theoretical underpinnings. Training often involves both attention to the ways in which interviews are conducted and how the data is analyzed in accordance with specific methodologies.

Moving into Practice

One of the more common responses to psychosocial research and climate change issues is the concern with practicality and application; how can this be applied, quickly and effectively? While much of this paper has reviewed both the context in which psychosocial work resides (in a landscape of varied approaches to the behavioural dimensions of climate change) and unique contributions on a more conceptual level, the capacities for applying this work to a variety of contexts are strong and already underway. Examples include the aforementioned Carbon Conversations (now administered through the organisation Surefoot Effect), which was based on a psychoanalytic and psychosocial approach, as well as the rise of 'conversation-based campaigns' as recognised practices and models for engaging people (i.e. the recent ClimateAccess.org webinar, "Climate Conversation Campaigns: A Climate Access Case Challenge", 27 February 2014).

What is it that is specifically 'psychosocial' about platforms such as Carbon Conversations, or designing and using research methodologies to explore how people are making sense, negotiating and coming to terms with climate change science and the implications? There are a few key elements we can identify.

Skillful Listening

First, is the importance of *listening* as a core feature. This sets apart psychosocial research and practices in how methods are designed for 'listening' in very particular ways -- this can

take the form of in-depth interviews, group interviews, or sensitive and skillful survey design, to allow for more richness when charged topics are being raised. The nature of the enquiry tends to be on the stories, memories, and accounts people may share, and less on their opinions or views on particular issues. This is based on the recognition from psychotherapeutic practice that it is often in the act of active, empathetic listening and dialog, whether using motivational interviewing or appreciative enquiry or other methods, that people often experience realisations, revelations and thus are able to make more capable decisions. Listening also is a vital skill and aptitude for those designing engagement strategies, and signals a fundamental shift from 'getting people to change' to 'working with people to co-create the most effective mechanisms for change'. A psychotherapist when working with clients often views his or her role as a collaborator and partner. Similarly, psychosocial research and engagement shares the spirit of working-with people, versus working-on people. Skillful listening is also to the benefit for those designing engagement and communications strategies to 'listen' in particular ways for where people may feel stuck, compromised, or in dilemmas, precisely because this is what tends to lead to the avoidance often encountered when it comes to facing our ecological crises. If there is evident resistance to the facts of climate change as it impacts our world and our futures, then it behooves us to understand the nature of this resistance, and work towards finding openings and solutions. This emphasis on listening and conversation also recognises humans as social beings who construct our views of the world, and ourselves in it, through our social interactions. Leveraging this in service of climate change engagement, such as a conversation-platform, can expedite the potential for people to implement changes in their lives, particularly if there is a sense of support, encouragement and social validation.

Recognising our need for efficacy

Second, is recognising people generally have the need for efficacy -- to experience ourselves and in community as having efficacy and agency. Conversely, when agency or efficiency is either feared to be, or is actually thwarted or limited, we tend to withdraw affectively and focus energies in areas where there may be more impact, i.e. consumption, diet, food choices, and so on. Related to this, is the psychoanalytic insight notably put forward by Donald Winnicott, that we also have an innate need to be creative and contributing-to

something greater and bigger than ourselves.⁹ When these elements are taken together -- the need to listen and practice empathy in our programming and engagement strategies, the role of social interaction in shaping behaviours, and the human need for efficacy -- we begin to see how psychosocial approaches to climate change are about engaging the 'whole person' in the fullest contexts.

Acknowledgement

There is an acute attention in psychosocial work and practice to the need for processing difficult emotions, and that insofar as we neglect this need, our best efforts will be thwarted by the ongoing process of managing and negotiating painful and confusing responses to climate change sciences. This is also why the concept of *acknowledgement* is central to psychoanalytic work; both acknowledging and sharing such struggles and conflicts is a fundamental premise of group work and conversation-platforms, as it provides a scaffolding and support for facing what may be overwhelming information and awareness. In other words, our capacities to convey, "We know this is difficult, this is a lot to take in, and we are all in this together" may be most effective towards navigating the well-known responses to either manic climate activism, or the other end of the spectrum, a fatalistic withdrawal or otherwise lack of engagement.

In terms of training, the skills most salient for developing psychosocial research methodological capacities and applications not surprisingly are similar to those offered in clinical training programmes. This includes theoretical grounding in psychodynamic and psychoanalytic understandings of subjectivity (discussed above); research interviewing methods focused on establishing rapport, safety and cultivating dialog; and data analysis that draws from both clinical case study approaches and narrative qualitative social science methodologies. In relation to climate change research and engagement, there is great opportunity and potential for innovating trainings and empirical methods to be suited for these particular contexts; this requires the willingness to pilot, generate case studies, iterate and continually refine and test for efficacy.

⁹ The recognition of altruism as a key motivation has also been increasing in the behavioural change discourse, i.e. Pink 's (2011) discussion of the limitations of incentives for motivating changes, and the power of tapping into our altruism, thereby potentially revising our notions of what effective levers for motivating behavioural changes may in fact be.

Beyond simply engaging people in conversations, however, psychosocial insights can be applied readily to the design of campaigns, messaging, engagement strategies and development of new research scopes. If we consider application of the core concepts of listening, acknowledgement of potential anxieties and concerns, and the emphasis on collective action, it becomes increasingly clear how psychosocial approaches can be innovated and translated across contexts.

This can be done ideally through effective *collaboration* across the "Quadrants" -- our capacities to engage complementary and respective skills that can bring into concert the necessary perspectives and expertise to create genuinely integrative approaches. This can take the form of cross-sectoral, cross-disciplinary teams, partnerships and collaborations to ensure psychosocial elements are involved in our projects and initiatives. Forging effective networks across government, private and public sectors, that are inclusive and cognizant of the contributions across all four of the Quadrants can help ensure bridging theoretical insight into applied practices and interventions. Our capacities to meet people where they are, understand latent and core concerns, desires, anxieties and conflicts and reflect these in our messaging and engagement practices is where the psychosocial application lives and finds traction. In order to do so, we must first know what these actually are (through our abilities to design and generate meaningful research insights, case studies and partnering with practitioners involved with specific communities), engaging actively in sharing knowledge and resources across these epistemic landscapes, and fostering contexts and support for collective learning and innovating methodologies and frameworks in addressing human responses to climate change sciences and the implications for our lives.

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